H900 1.0

Work Order ID 105609

105609

Thursday, August 08, 2013 2:34:06 PM

Item ID: D3691-1 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: STUD

Start Date: 8/8/2013 **Start Qty:** 12.00 *12* **Cust Item ID:**

Required Date: 8/22/2013 **Req'd Qty:** 12.00 *12* **Customer:**

Reference:

Run Start *NR1*

Approvals: **Process Plan:** MLS **Date:** 13-08-08 **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:** **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3691	E								
100		0.00							
100	BAND SAW					12	ϕ		
Bandsaw	**Memo**	0.00							
Jeaspa Bandsaw	***DO NOT USE CHOP SAW*** Cut blank 7.750" long								
	SL 13-10-18								
110		0.00							
110	DOOSAN LATHE					12	ϕ		
Doosan	**Memo**	0.00							
Doosan Lathe	1-Turn as per Folio FA716 Rev: ____ & Dwg D3691 Rev: ____ 2-Deburr per dwg D3691 3-Check .625" bore with DT9530 GO/NO GO Gauge SL 13-10-22								
160	QC2- Inspect parts off machine FAI/FAIB	0.00							
160						12	ϕ		
QC	**Memo**	0.00 SL 13-10-22							
Quality Control									

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Run Start *NR1*

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Stop *NR2*

QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC8- Inspect parts - second check	0.00							
170			SS 13-10-25			12	0		
QC	**Memo**	0.00							
Quality Control	100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT								
171		0.00							
171			CL 13/11/08 (12)						
Purchasing	**Memo**	0.00							
Purchasing	Liquid Penetrant Inspection as per QSI 038 Issue P/O: 21994 LPI as per dwg D3691 Attach copy of NDT results to work order								
173	Receive & Inspect for Damage & Mat'l Certs	0.00							
173			13/a/8 (12						
Packaging	**Memo**	0.00							
Packaging									

Work Order ID 105609

105609

Thursday, August 08, 2013 2:34:06 PM

Item ID: D3691-1 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: STUD

Start Date: 8/8/2013 **Start Qty:** 12.00 *12*
Required Date: 8/22/2013 **Req'd Qty:** 12.00 *12*
Reference:

Cust Item ID:
Customer:

Run Start *NR1*
Stop *NR2*

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**
QC: **Date:** **SPC (Y/N):** **Date:**

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
175	QC5- Inspect part completeness to step on W/O	0.00							
175						12			13-11-08
QC	**Memo**	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: ST225	0.00							
180						12x		13-11-12	
Packaging	**Memo**	0.00					DAS 28 9-89		
Packaging									
190	QC21- Final Inspection - Work Order Release	0.00							
190									13/11/13
QC	**Memo**	0.00							
Quality Control									

MF 13-11-12

Picklist Print

Thursday, August 08, 2013 2:34:11 PM

Work Order ID: 105609

105609

Parent Item: D3691-1

D3691-1

Parent Item Name: STUD

Start Date: 8/8/2013 **Required Date:** 8/22/2013

Start Qty: 12.00 **Required Qty:** 12.00

Comments: IPP Rev:A New Issue 08-01-29 JLM Veriified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC IPP
REV:C AS PER REV D 10-03-16 JLM VERIFIED BY:EC
IPP Rev:C Added note on Step 2 09-01-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.000		Purchased	No				f	27.1180	**	8.764382			

M174PH-H900R1.000

17-4SS H900 ROUND BAR 1.00

13-10-18

Location	Loc Qty	Loc Code	
MAT030	27.118		
117445	2.46		
120767	10.124		
121280	1.8		
121918	12.326		
122577	0.408		

126952

8.5 ft

DART AEROSPACE LTD	Work Order:	105609
Description: Stud	Part Number:	D3691-1
Inspection Dwg: D3691 **Rev:** E		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.695	+/-0.010	.695	✓			
45°	0.5°	45°	✓			
0.625	+0.004/-0.000	.624	✓			
1.25	+0.000/-0.03	1.230	✓			
118°	0.5°	118°	✓			
R0.03	+/-0.030	R.03	✓			
0.11 Ref	+/-0.030	.11	✓			
90°	0.5°	90°	✓			
~~Ø0.189~~	+0.005/-0.001	.216	✓			
1.31	+/-0.030	1.34	✓			
1.65	+/-0.030	1.68	✓			
0.750	+0.000/-0.010	.746	✓			
Ø0.659	+0.000/-0.015	.649	✓			
7.625	+/-0.015	7.631	✓			
2.90	+/-0.030	2.90	✓			
3/4-16UNF-2A	N/A		✓			
0.075 x 45°	+/-0.010 x 0.5°	.075x45	✓			
0.375	+0.000/-0.010	.372	✓			
Ø0.216	+0.005/-0.001	.216	✓			
R0.25	+/-0.030	R.25	✓			
R0.50	+/-0.030	R.50	✓			
Ø.825	±.010	.823	✓			

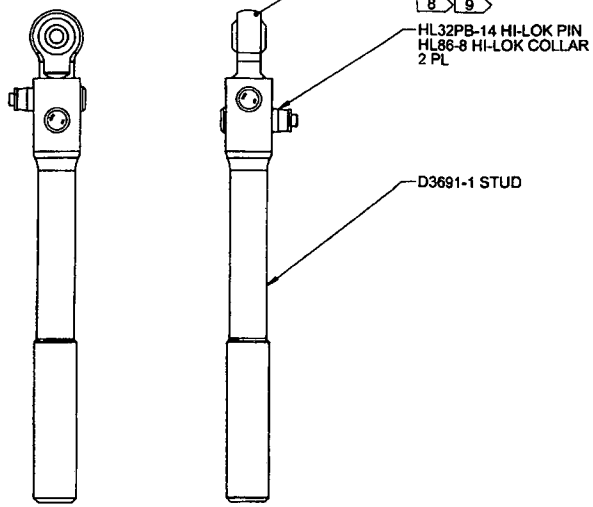
Measured by:	DAS 13 9-Sep
Date:	18-10-22

Audited by:	
Date:	13-10-25

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	
B	09.11.04	Dwg Rev updated	KJ	
C	10.03.31	Dimensions revised per Dwg Rev D	KJ	
D	13.02.27	Ø0.216 was Ø0.189	KJ	

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D3691-041	STUD ASSEMBLY
2	1	D3691-1	STUD
3	1	D3693-1	ROD END BEARING
4	2	HL32PB8-14	HI-LOK PIN
5	2	HL86-8	HI-LOK COLLAR



105609 MLJ
13-08-08

RELEASED
2013 -01- 22

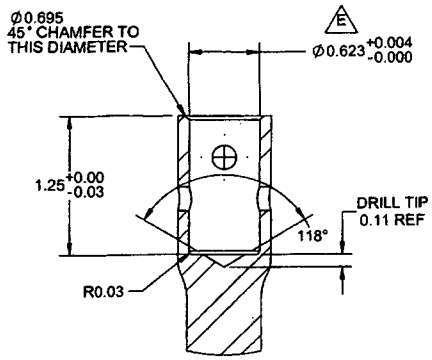
E **D3691-041 STUD ASSEMBLY**

REV.	DESCRIPTION	BY	DATE
E	ADD -041 STUD ASSEMBLY, ASSEMBLY INSTRUCTIONS (ZN A8-1, ZN B6-1, ZN D7-1), Ø0.216 WAS Ø0.189 (ZN D2-2, D4-2), Ø0.623 WAS Ø0.825 (ZN D7-2), RE-FORMAT NOTES SECTION AS PER QSI 043 (ZN A8-1), REF NCR 12-2074	DB	12.12.07
D	7.625 WAS 7.750 (ZN C4-1)	RF	10.03.03
C	0.20 WAS 0.16 & CENTER DRILL #4 WAS CENTER DRILL #2 (ZN B6-1); UPDATE NOTE 8 TO REF QSI (ZN A8-1)	RF	09.09.09
B	CHANGE TO 17-4PH H-900 (ZN A8-1); Ø0.695 WAS Ø0.665 (ZN D8-1);REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.03.12

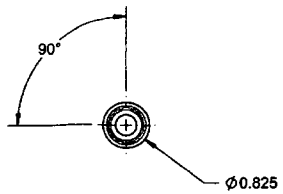
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MB	DRAWING NO.	REV. E
MFG. APPR.	JLM	D3691	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		STUD	NTS
DATE	12.12.07		

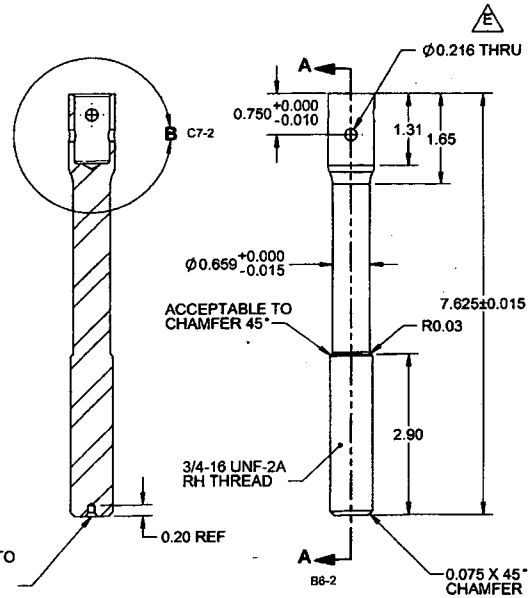
NOTES:
1) MATERIAL: N/A
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: N/A
E 6) IDENTIFICATION: NONE
7) WEIGHT: 1.04 lbs
8) ALIGN THE PILOT HOLES IN D3693-1 WITH PILOT HOLES IN D3691-1. ENLARGE EACH HOLE USING A P/N 13-420 PILOTED DRILL (0.2314 DIA./0.2158 PILOT). REAM EACH HOLE USING A P/N 44-300 STEP REAMER (0.247 DIA./0.2314 PILOT). CLEAN AND DEBURR ALL HOLES PRIOR TO ASSEMBLY.
9) ASSEMBLE D3693-1 WITH D3691-1 USING HYSOL EA934NA OR MAGNOBOND 6398 ADHESIVE BETWEEN MATING SURFACES.

105609

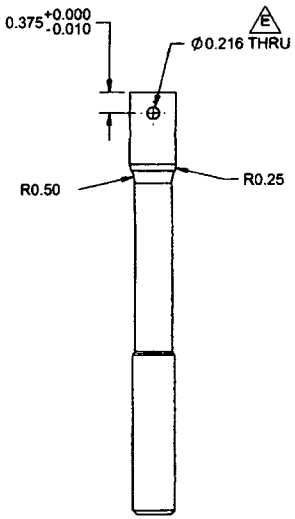


DETAIL B C5-2
SCALE 1 : 1





SECTION A-A B4-2



RELEASED
2013 -01- 22

NOTES:
1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.80 lb
8) LPI PER QSI 038 4.1.1 (ASTM E1417 LEVEL 2)

DESIGN	RF	**DART AEROSPACE LTD**
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA
CHECKED	MB	DRAWING NO. D3691 REV. E
MFG. APPR.	JLM	SHEET 2 OF 2
APPROVED		TITLE STUD SCALE NTS
DE APPR.		
DATE	12.12.07	

LIQUID PENETRANT TEST REPORT

P- 12255

ACUREN

CLIENT	Dart Aerospace	DATE	Nov 7 2013
ATTENTION	Chantale, Linda, Andy	ACUREN JOB NO.	188-13-C0393
ADDRESS	1270 Aberdeen, Hawkesbury, on	PO/WO NO.	21994
		WORK LOCATION	As Address
PROJECT	Pt-wet Fluorescent Liquid penetrant Inspection	ACCEPTANCE STD.	ASTM1417/CEV 0350
ITEM(S) EXAMINED	-See below		

PAGE 1 OF 1 — TIME AM ☐ PM ☑ — REV./DATE 2005

JOB DESCRIPTION | PROCEDURE NO. LT-002 REV./DATE 2009 | TECHNIQUE NO. LT-003 REV./DATE 2009

PART NO. | MATERIAL Aluminum | THICKNESS —

SCOPE Performed a wet Flu L.P.I on 100% of the external surface only on Item mentioned below

TEST DETAILS

METHOD	☑ FLUORESCENT ☐ VISIBLE			☑ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED	
FAMILY BRAND	MagnaFlux			BLACK LIGHT S/N 3790 ☐ OUTPUT > 1000 µ W/CM² ☐ AMBIENT < 2 fc	
PENETRANT	ZL-67	MINIMUM DWELL TIME	30 MIN.	LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT>100 fc @ SURFACE	
PENETRANT REMOVER	H2O	MINIMUM DRY TIME	>10 MIN.	OTHER	
DEVELOPER	SKD S2	MINIMUM DWELL TIME	30 MIN.	LIGHT METER S/N 1098866	CAL DUE DATE May 2014
DEVELOPER TYPE	☑ NON AQUEOUS ☐ AQUEOUS ☐ DRY				

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☑ MACHINED ☐ SHOT BLASTED ☑ CLEAN BARE METAL

SURFACE TEMPERATURE ☐ < - 4°C/ 20°F ☐ - 4°C/ 20°F TO 10°C/50°F ☑ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

	COMMENTS	ACCEPT	REJECT	
1	5x Stud W.O ID 103531	✓		Item ID 03688-7
2	12x Stud W.O ID 103882	✓		Item ID 03691-1
3	10x Stud W.O ID 105447	✓		Item ID 03688-7
4	11x Stud W.O ID 105606	✓		Item ID 03688-5
5	13x Stud W.O ID 105607	✓		Item ID 03688-3
6	12x Stud W.O ID 105609	✓		Item ID 03691-1
7	Aft crosstube W.O.I.D 108703	✓		Item ID 0407-667-205
8	Aft crosstube W.O I.D 108704	✓		Item ID 0407-667-205

No Relevant Indication was detected as per applicable Standard at the time of Inspection.

13.11.08

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE: Andy Sheldon (PRINT) — (SIGNATURE)

TECHNICIAN (SIGNATURE):

NAME (PRINT): Alexandre Michaud (1ST TECHNICIAN) — (2ND TECHNICIAN)

CGSB LEVEL	2	SNT LEVEL	2
CGSB REG. NO	101483		
CGSB LEVEL		SNT LEVEL	
CGSB REG. NO			

DTR # E-07754

REPORT REVIEWED BY:

NAME	INITIALS

WHITE – CLIENT COPY CANARY – OFFICE COPY PINK – TECHNICIAN COPY GOLD – OFFICE COPY